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10/510,466	10/07/2004	Shuji Yano	UNI79.033APC	6266

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EXAMINER

PRITCHETT, JOSHUA L

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/510,466

Applicant(s)

YANO ET AL.

Examiner

Joshua L. Pritchett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 11-18 is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/06</u> | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This action is in response to Amendment filed October 10, 2006. Claim 2 has been amended as requested by the applicant.

#### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3-10 and 19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims <sup>2 and 4-10</sup> ~~1 and 3-10~~ of copending Application No. 10/511,397.

Regarding claims 1 and 19, 10/511,397 claims a light-diffusing sheet comprising a light-diffusing layer, which is made of a resin coating layer having a minute unevenness formed on a

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surface thereof, is formed on at least one side of a transparent film, wherein the transparent film includes a thermoplastic resin (A) having a substituted and/or non-substituted imido group in a side chain, and a thermoplastic resin (B) having a substituted and/or non-substituted phenyl group and nitrile group in a side chain (claim 1).

Regarding claim 6, 10/511,397 claims wherein if in the transparent film, a direction along which an in-plane refractive index is maximized is X axis, a direction perpendicular to X axis is Y axis, a thickness direction of the film is Z axis; refractive indexes in the respective axis directions are  $n_x$ ,  $n_y$  and  $n_z$ ; and a thickness of the transparent film is  $d$  (nm) by definition, the transparent film satisfies the following relations: in-plane retardation  $R_e = (n_x - n_y) \times d \leq 20$  nm and thickness direction retardation  $R_{th} = \{(n_x + n_y)/2 - n_z\} \times d \leq 30$  nm (claim 3).

Regarding claims 7 and 15, 10/511,397 claims wherein the transparent film is a biaxially stretched film (claim 4).

Regarding claim 3, 10/511,397 claims wherein the resin coating layer comprises fine particles and the surface unevenness shape of the resin coating layer is formed with the fine particles (claim 5).

Regarding claim 4, 10/511,397 claims wherein the fine particles are organic fine particles (claim 6).

Regarding claim 5, 10/511,397 claims wherein the resin coating layer is formed with ultraviolet curing resin (claim 7).

Regarding claim 8, 10/511,397 claims a low refractive index layer lower in refractive index than the resin coating layer is provided on the unevenness surface of the resin coating layer of the light-diffusing sheet (claim 8).

Regarding claim 9, 10/511,397 claims the light-diffusing sheet is provided on one side or both sides of an optical element (claim 9).

Regarding claim 10, 10/511,397 claims a display comprising the optical element (claim 10).

This is a provisional obviousness-type double patenting rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 3, 4, 7, 9, 10 and 19 are rejected under 35 U.S.C. 102(a) as being anticipated by Fuji (EP 1 160 591).

Regarding claims 1 and 19, Fuji discloses a light-diffusing sheet comprising a light-diffusing layer, which is made of a resin coating layer having a minute unevenness formed on a surface thereof, is formed on at least one side of a transparent film, wherein the transparent film includes a thermoplastic resin (A) having a substituted and/or non-substituted imido group in a side chain, and a thermoplastic resin (B) having a substituted and/or non-substituted phenyl group and nitrile group in a side chain (abstract).

Regarding claim 3, Fuji discloses wherein the resin coating layer comprises fine particles and the surface unevenness shape of the resin coating layer is formed with the fine particles (para. 0127).

Regarding claim 4, Fuji discloses wherein the fine particles are organic fine particles (para. 0127).

Regarding claim 7, Fuji discloses wherein the transparent film is a biaxially stretched film (para 0158).

Regarding claim 9, Fuji discloses the light-diffusing sheet is provided on one side or both sides of an optical element (paras. 0195, 0201).

Regarding claim 10, Fuji discloses a display comprising the optical element (para. 0198).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuji (EP 1 160 591) in view of Suzuki (US 2002/0150722).

Fuji teaches the invention as claimed but lacks reference to ultraviolet curing. Suzuki teaches the resin coating layer is formed with ultraviolet curing resin (para. 0085). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the

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Fuji invention formed by ultraviolet curing as taught by Suzuki for the purpose of efficiently and precisely setting the resins used to create the light-diffusing sheet.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuji (EP 1 160 591).

Fuji teaches wherein if in the transparent film, a direction along which an in-plane refractive index is maximized is X axis, a direction perpendicular to X axis is Y axis, a thickness direction of the film is Z axis; refractive indexes in the respective axis directions are  $n_x$ ,  $n_y$  and  $n_z$ ; and a thickness of the transparent film is  $d$  (nm) by definition, the transparent film satisfies the following relations: and thickness direction retardation  $R_{th} = \{(n_x + n_y)/2 - n_z\} \times d \leq 30$  nm (page 15 line 35; para. 0147). Fuji lacks specific reference to the in-plane retardation. Fuji suggests the in-plane retardation  $R_e = (n_x - n_y) \times d \leq 20$  nm (para. 0144). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Fuji invention include the claimed in-plane retardation relation as suggested by Fuji for the purpose of transmitting a uniformly diffused light beam without a decrease in intensity while maintaining clarity of any image projected through the diffusion sheet.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuji (EP 1 160 591) in view of Winston (US 2002/0061178).

Fuji teaches the invention as claimed but lacks a low index refractive layer. Winston teaches a low refractive index layer lower in refractive index than the resin coating layer is provided on the unevenness surface of the resin coating layer of the light-diffusing sheet (Figs.

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2C and 2D; para. 0091). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Fuji invention include the low refractive index layer of Winston for the purpose of substantially matching the refractive index of the light emitting layer with air to prevent reflection at the interface of the air and the light-diffusing sheet thus emitting as much light intensity as possible and providing a brighter image to the viewer.

***Allowable Subject Matter***

Claims 2 and 11-18 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 2, the prior art fails to teach or suggest the a ratio of an internal haze value to a total haze value is 0.5 or more and less than 1 and the total haze value is between 30% and 70%, wherein the total haze value is a haze value of a light-diffusing sheet and the internal haze value is a value obtained by subtracting 11% from a haze value measured in a state where a pressure-sensitive adhesive coated transparent sheet having a haze value 11% is adhered onto the minute unevenness shape surface rough of the light-diffusing sheet.

Yano (US 6,585,386) teaches a haze value of less than 45% which falls within the claimed range of haze values (col. 10 lines 35-36).

Suzuki (US 2002/0150722) teaches a haze ratio of 15/17 or 0.88 (Table 4 Comp. Ex 1).

Neither of these reference however teaches the claimed method of determining the internal haze value of applying the 11% haze adhesive sheet.

The remaining claims depend from claim 2 and are allowable for the same reasons.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

Applicant's arguments, see Amendment, filed October 10, 2006, with respect to objection to the abstract have been fully considered and are persuasive. The objection of the abstract has been withdrawn. Applicant amended the abstract to comply with the requirements set forth in the MPEP.

Applicant's arguments, see Amendment, filed October 10, 2006, with respect to the rejection(s) of claim(s) 1 under 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of 102(a). Examiner apologizes for any confusion resulting from the inadvertent typographical error that resulted in the use of 102(e) instead of 102(a) in the prior rejection. Fuji was published by another on December 5, 2001 which is before the effective filing date of the current application and therefore is a valid reference under 102(a).

Applicant's arguments filed October 10, 2006 have been fully considered but they are not persuasive.

Applicant argues Fuji fails to disclose the light-diffusing sheet comprising a light-diffusing layer, which is made of a resin coating layer having a minute unevenness. Minute unevenness is inherent in the manufacturing process. Further, all materials have some unevenness on the surface as a result of grain structures or overlap of polymer chains that cause one chain to sit atop another. The claim limitations provide no scale for "minute."

Applicant argues Fuji provides no disclosure of a resin coating layer comprising fine particles. Applicant states the Fuji reference teaches the a filler contained in the film. The Fuji reference teaches the use of resin layer in the abstract. The claim does not require two separate layers, therefore the particles contained in the resin of Fuji meets the claim limitations.

Applicant argues Fuji lacks surface roughness. Surface roughness is a result of surface unevenness as set forth above with regards arguments directed to claim 1.

Applicant argues the current invention has excellent adhesion while the prior art does not. This limitation is not in the claim language and therefore this argument is moot.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua L Pritchett   
Examiner  
Art Unit 2872



**DREW A. DUNN**  
**SUPERVISORY PATENT EXAMINER**